

## **TROPICAL RAINFALL MEASURING MISSION**

**May 8, 2000 - May 14, 2000**

**DOY 129 - 135**

**Day of Mission 892 - 898**

### **TRMM MISSION OPERATIONS**

- TRMM is flying in the +X Forward direction as of 00-111, at 12:52:13z.
- Yaw maneuver #41 is scheduled for May 19th (00-140).
- Delta-V maneuver #194 is scheduled for May 16th (00-137), using the LBS thrusters.
- The Beta angle range for 00-136 through 00-142 is 20.6° to -5.5°.
- The next Monthly Status Review is scheduled for June 7th (00-159).
- The next CCB meeting is scheduled for May 15th (00-136).

### **TRMM SUBSYSTEM OPERATIONS**

#### **Attitude Control System (ACS)**

Delta-V maneuver #192 was successfully conducted on 00-131 at 15:43:50z and 16:29:40z for durations of 40.125 and 21.250 seconds respectively, using the LBS thrusters. The off-modulation of the -Yaw thruster (#1) for burn 1 was 6.9% (93.1% on time). The off-modulation of the +Pitch thruster (#2) for burn 1 and 2 was 25.3% and 20.0% (74.7% and 80.0% on time). The remaining fuel is 582.430 kg, and the final apogee and perigee height is 354.71 km x 347.42 km.

Delta-V maneuver #193 was successfully conducted on 00-134 at 15:15:34z and 16:01:15z for durations of 39.000 and 19.125 seconds respectively, using the LBS thrusters. The off-modulation of the -Yaw thruster (#1) for burn 1 was 3.9% (96.1% on time). The off-modulation of the +Pitch thruster (#2) for burn 1 and 2 was 26.0% and 18.3% (74.0% and 81.7% on time). The remaining fuel is 581.041 kg, and the final apogee and perigee height is 354.67 km x 347.63 km.

The ESA experienced Sun interference in quadrants 1 and 3 on 00-129 through 00-134. ACS performed nominally during the transitions between 3 and 4 head control.

#### **Flight Data System (FDS)/Command & Data Handling (C&DH)**

The current frequency standard offset remains x'796' with a current drift rate of +0.27  $\mu$ s/hr. The drift continues in the positive direction since the last frequency standard adjustment but is slowing and is expected to return to a negative drift direction next week. The UTCF remains 31535996.843867 seconds with a current drift value of +179  $\mu$ s.

Q-channel restarts occurred on 00-134 at 21:04:34z and on 00-135 at 15:33:42z.

An Invalid Stream Id from XI message occurred on 00-130 at 03:50:01z due to TMI.

## **Reaction Control Subsystem (RCS)**

The RCS subsystem performed nominally during this period. See the ACS section for specific Delta-V information.

## **Power Subsystem**

The Power subsystem is operating nominally.

## **Electrical Subsystem**

The Electrical subsystem operated nominally during this period.

## **Thermal Subsystem**

The Thermal subsystem operated nominally during this period.

## **Deployables Subsystem**

The Deployables subsystem performed nominally during this period.

## **RF/Communications Subsystem**

The RF/Communications subsystem performed nominally during this period.

There was a generic 1 min 43 sec late acquisition on the TDS 21:24z event on 00-130 (Late Acq #57). All data was recovered.

## **SPACECRAFT INSTRUMENTS**

### **CERES**

A standard Internal Sequence 12 calibration was performed on 00-131 at 01:29:35z.

CERES testing continued this week with a new microprocessor load which was uplinked on 00-130 at 17:45z.

### **LIS**

LIS performed nominally during this time period. A standard command request to reset the instrument and reconfigure to nominal was performed on 00-132 at 12:32z.

The LIS VR3 overflowed on 00-135 at 17:14:27z for 1 minute and 3 seconds (ER #175). This was due to DS1 not being released on the TDE/15:21z event by the console crew.

### **PR**

PR performed nominally during this time period.

The list of Internal Calibration times over Australia in which PR was not radiating is below:

2000/129:05:40:37 - 05:42:44z  
2000/130:04:29:05 - 04:31:15z  
2000/130:20:46:53 - 20:51:43z  
2000/131:04:51:42 - 04:53:41z  
2000/132:03:40:06 - 03:42:15z  
2000/132:19:58:13 - 20:03:05z  
2000/133:02:28:47 - 02:31:01z  
2000/134:02:51:13 - 02:53:22z  
2000/134:19:09:27 - 19:11:31z  
2000/135:01:39:46 - 01:41:59z  
2000/135:18:00:28 - 18:02:11z

## **TMI**

TMI performed nominally during this time period.

## **VIRS**

VIRS performed nominally during this time period.

## **GROUND SYSTEM**

Testing of MOC release 8.1 continues on String 3 with no significant problems found to date.

The power configuration for String 2 was modified on 00-131 so that it is powered by a different UPS than String 1 (UPS-2 vice UPS-5) for power failure redundancy. In addition, the Local TPOCC Switch (LTS) and the backup PTP were similarly configured for added redundancy.

## **Event Reports**

ER #175: LIS Science Data Recorder Overflow

## **Generic Late Acquisition Reports (for TTRs 19639)**

#57: 00/130-21:24z; TDS; 1 minute 43 seconds late AOS.

## **New Anomaly**

No new Anomalies occurred during this period.

## **Recurring Open Anomalies**

No Open Anomalies recurred during this period.

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